REMARKS

This is in response to the United States Patent and Trademark Office Action mailed on December 27, 2005. By said office action, the Examiner rejected the claims of the patent application (see pages 2-6 of the Action) as follows:

1. Claims 1-4, 15 and 37-42 as obvious over Slimak et al (US 6,303,234).
2. Claims 5, 7, 20, 21, 31 and 33-36 as obvious over Slimak et al, in view of Giesemann (US 5,431,996).
3. Claim 6 as obvious over Slimak et al, in view of Riker (US 5,405,555).
4. Claims 18-21 as obvious over Slimak et al, in view of Veiga et al. (US 5,622,662).
5. Claims 31-36 as obvious over Slimak et al, in view of Kaneko et al. (US 3,963,547).

Claims 8-14, 16, 17, 22-29, and 48 – 99 have been previously withdrawn in response to Applicant's election.

Applicant respectfully traverses these rejections.

Claim Rejection - 35 USC § 103a

over Slimak et al., Giesemann., Riker., Veiga et al., and Kaneko

To better distinguish the present invention form the cited art, claim 1 has been amended.

The examiner has found the present invention obvious, citing US Patent 6,303,234 to Slimak, et al., and Slimak, et al., in view of Giesemann., Riker., Veiga et al., and Kaneko.

Slimak et al. (6,303,234) teach a fire-retarding material, by treating cellulosic materials, including dimension lumber, plywood, particle board, wafer board, paper, fabric and similar materials, with sodium silicate (Na.sub.2 O.SiO.sub.2) in concentrations ranging from 400-0.04 g Na.sub.2 O.SiO.sub.2 /kg water. Slimak makes no mention of sound absorption.

Giesemann (US 5,431,996) is directed to a composite material of one or more preformed reinforcement materials, made of tension-resistant organic and/or inorganic material, a second material of alkali water glass and a finely disperse mineralic filler.

It is noteworthy that Giesemann does not realize the potential sound absorption properties of his composite, were he to reduce the amount of water glass, in his composite, as taught by Applicant. Rather, Giesemann teaches forming a sound

absorbing cell structure, like a honeycomb, from his composite material, and relying on the cell structure to absorb sound. See his Figure 11E:

"Such a slab is used, for instance, in lowered ceilings, with the open, cell-like side being directed downward to the room. The bottom side absorbs air sound waves by means of the cell structure with its narrow walls (FIG. 11E)."

Riker (US 5,405,555) also relates to a fire-retardant material, by coating a cellulosic materials with a fire retarding solution, which consists essentially of: ammonium sulfate 3-10% by weight, boric acid 1-5% by weight, borax 0.3-1% by weight, hydrogen peroxide 1-5% by weight, and optionally a surfactant and/or an alkyl phthalate ester. Riekr makes no mention either of a water glass solution nor of sound absorption.

Kaneko et al (US 3,963,547) teach a composite heat-insulating material, by stacking to a desired thickness pieces of aluminum foil adhesively secured to foam-forming ceramic material, filling the volume to be occupied by said heat-insulating layer or a vessel with the resulting stack, and heating it to cause foaming of said ceramic material. Kaneko makes no mention of sound absorption.

Veiga et al (US 5,622,662) relates to sound attentuation by loading an open cell foam structure or another polymeric structure, with barium sulfate, or an equivalnet, and is not at all similar to the non-woven fabric material of the present invention.

Respectfully, the cited art covers a very wide range of composites and their applications. But the claimed invention, as recited in claim 1, relates to a very specific composite for a very specific application, as follows:

"(i) a fabric material of between about 0.4 and about 7 mm in thickness, said material being pervious to air, and characterized by proximal and distal surfaces with respect to a sound source, an internal structure, and a specific weight; and

(ii) a water-glass coating, which is applied in a controlled manner and which adheres to said surfaces and internal structure, increasing said specific weight by a controlled, predetermined factor, said factor being between about 1.1 and about 4, so as to maintain a perviousness to said material, while providing said sound absorbing article with an NRC (Noise reduction Coefficient) value of at least 0.80."

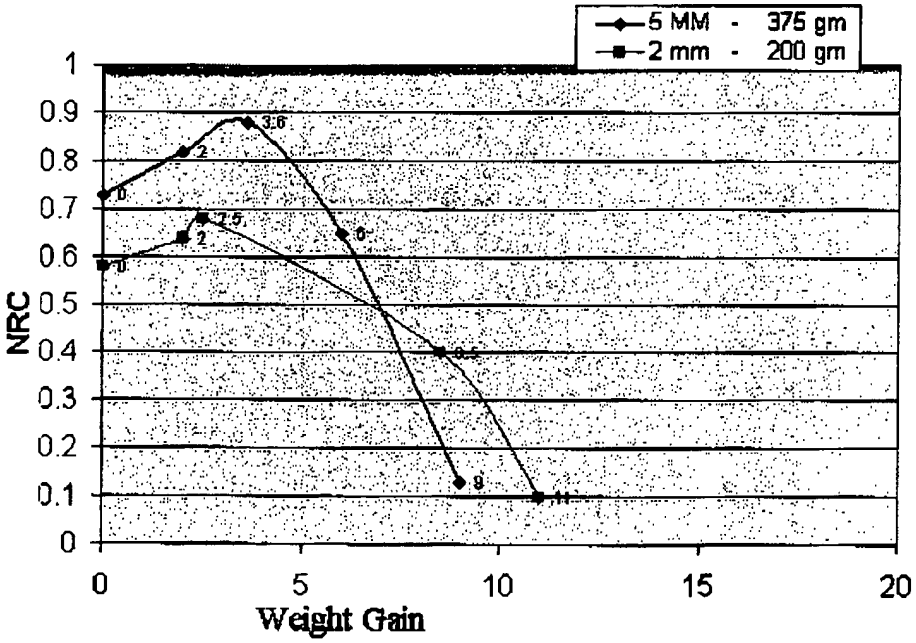
The distinction between the present invention, as recited herein, and the prior art is not that of degree, it is not optimizing the ratio of ingredients in a known

composite, for a known use, which as the examiner has stated before, relates to routine skill of the art.

Rather, the distinction is of ***a specific choice of materials for a specific use***, namely sound absorption. None of the cited art teaches or suggests using the material recited in claim 1 for sound absorption.

Given the endless ways for forming composites, Applicant invention relates to a very specific composite, which has unique sound absorption properties. His invention is of identifying this composite from the endless possible ones, and arriving at results of very high sound absorption values, namely NRC values of between 0.8 and 0.9, in a very thin materials of less then 7 mm, as shown by the graph below.

NRC Values as a Function of Weight Gain
For a non-woven cotton fabrics of
and 2 mm and 5 mm in thickness



That Applicant's invention is not obvious, in view of the art cited, is demonstrated by the fact that Giesemann constructs a sound absorber by forming a honeycomb like cell structure, from a composite, of similar ingredients, but of different respective ratios, for he did not realize that had he changed their respective ratios, he would have had a sound absorber.

The allowance of Claims 1-7, 15, 31-39, and 100 – 102 is deemed in order and such action is respectfully requested.

Respectfully submitted,

Sol Sheinbein
Registration No. 25,457

Date: May 26, 2005